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**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Previously presented) A pigment epithelial cell of the eye, which comprises vector DNA of an adenoviral vector comprising at least one expressed nucleic acid operatively linked to a promoter, said vector comprising neither adenoviral nor *E. coli* coding DNA sequences.

2. (Previously presented) The pigment epithelial cell of the eye as claimed in claim 1, which is a retinal pigment epithelial cell.

3. (Previously Presented) The pigment epithelial cell of the eye as claimed in claim 1, where the vector DNA comprises at least one therapeutic nucleic acid, in particular a therapeutic gene, preferably for a neurotrophic factor such as GDNF, PEDF, NGF, BDNF, CNTF, bFGF or neurotrophin 3,4-5, an antiangiogenetic factor such as a soluble VEGF receptor-1 (sflt-1), a dominant-negative VEGF receptor-2 (KDR) or PEDF, an antioxidative factor such as superoxide dismutase, catalase or various peroxydases, a lysosomal factor such as alpha-mannosidase, beta-galactosidase, N-acetyl-beta-glucosaminidase, N-acetyl-beta-galactosaminidase, and lipase, or a vasodilating factor such as NO synthase.

4. (Previously Presented) The pigment epithelial cell of the eye as claimed in claim 1, where the vector DNA comprises any one or more of a constitutively active, a regulatable or a tissue-specific promoter, or a regulatable expression system.

5. (Previously presented) The pigment epithelial cell of the eye as claimed in claim 1, where the cell produces at least one therapeutic protein encoded by said expressed nucleic acid.

6. (Previously Presented) The pigment epithelial cell as claimed in claim 1, where the cell is in a fixed assemblage of cells.

7. (Withdrawn) A pigment epithelial cell of the eye in the form of a fixed assemblage of cells.

8. (Withdrawn) A cultivation system comprising at least one pigment epithelial cell of the eye and a feeder layer.

9. (Previously presented) A method for producing a pigment epithelial cell of the eye as claimed in claim 1, the method comprising introducing an adenoviral vector to the pigment epithelial cell of the eye and thereby genetically modifying the cell, the adenoviral vector comprising at least one expressed nucleic acid operatively linked to a promoter, said vector comprising neither adenoviral nor *E. coli* coding DNA sequences.

10. (Previously presented) A method for producing a pigment epithelial cell of the eye as claimed in claim 1, the method comprising introducing an adenoviral vector to the pigment epithelial cell of the eye and cultivating the cell in serum-free medium or in the presence of a feeder layer, the adenoviral vector comprising at least one expressed nucleic acid operatively linked to a promoter, said vector comprising neither adenoviral nor *E. coli* coding DNA sequences.

11. (Withdrawn) A method for producing pigment epithelial cells of the eye in the form of a fixed assemblage of cells as claimed in claim 7, which comprises separating the assemblage of cells, in particular enzymatically, from surrounding tissue.

12. (Withdrawn) A method for producing pigment epithelial cells, which comprises cultivating the cells in a cultivation system as claimed in claim 8.

13. (Withdrawn) A method of treating an eye disease, in particular of AMD, a glaucoma, diabetic retinopathy or a genetic disease of the pigment epithelium, which comprises using a pigment epithelial cell as claimed in claim 1.

14. (Withdrawn) A method of treating an eye disease, in particular of AMD, a glaucoma, diabetic retinopathy or a genetic disease of the pigment epithelium, which comprises using a pigment epithelial cell as claimed in claim 7.

15. (Withdrawn) A method of treating as claimed in claim 13 or 14, where the pigment epithelial cell is transplanted into the eye, in particular the choroid, into the papilla and/or into the vitreous.

16. (Withdrawn) A method of treating a nerve disease, in particular a disease of the nervous system, preferably of the CNS, especially of Parkinson's disease, which comprises using a pigment epithelial cell.

17. (Withdrawn) The method of treating as claimed in claim 16, wherein the pigment epithelial cell is a pigment epithelial cell as claimed in claim 1.

18. (Withdrawn) The method of treating as claimed in claim 16, wherein the pigment epithelial cell is transplanted into the nervous system, in particular the CNS.

19. (Withdrawn) The method of treating as claimed in claim 13 or 14, wherein the pigment epithelial cell is an autologous pigment epithelial cell.

20. (Withdrawn) The method of treating as claimed in claim 16, wherein the pigment epithelial cell is an autologous pigment epithelial cell.

21. (Previously Presented) A medicament or diagnostic aid comprising a pigment epithelial cell of the eye as claimed in claim 1 and other excipients or additives.

22. (Previously Presented) The pigment epithelial cell of the eye as claimed in claim 1, where the cell produces at least one therapeutic RNA from said expressed nucleic acid.

23. (Previously Presented) The pigment epithelial cell as claimed in claim 1, where the cell has been cultivated in the presence of a feeder layer.

24. (Previously Presented) The pigment epithelial cell as claimed in claim 1, where the cell has been cultivated in serum-free medium.

25. (Currently amended) A method for producing the a pigment epithelial cell of the eye as ~~claimed in claim 1~~ comprising an adenoviral vector, the method comprising introducing an adenoviral vector to the pigment epithelial cell of the eye and cultivating the cell in serum-free medium and in the presence of a feeder layer, the adenoviral vector

comprising at least one expressed nucleic acid operatively linked to a promoter, said vector comprising neither adenoviral nor *E. coli* coding DNA sequences.